

- dynamic of said system using said trained neural network;
- (3) determining a test information flow that describes a test dynamic of said system using said test measured data;
- (4) using said comparison information flow and said test information flow, predicting said abnormality as established when said comparison information flow differs significantly from said test information flow, and predicting said abnormality as not established when said comparison information flow does not significantly differ from said test information flow;
- (5) when said abnormality of the system has been predicted as established, then implementing said action; and
- c) an actuator that implements said action.

16. (AS THREE TIMES AMENDED) A method for predicting an abnormality of a dynamic system and for implementing an action opposing the abnormality using a continuous information flow that describes a development of a predictability of several future system states, comprising:

- a) measuring comparison measured data of said system and test measured data of said system;
- b) determining a neural network that models said system using said comparison measured data;
- c) determining a comparison information flow that describes a comparison dynamic of said system using said neural network;
- d) determining a test information flow that describes a test dynamic of said system using said test measured data;
- e) comparing said comparison information flow to said test information flow using said comparison information flow and said test information flow;
- f) determining said abnormality to be predicted as established when said comparison information flow differs significantly from said test information flow;
- g) determining said abnormality to be predicted as not established when said comparison information flows does not significantly differ from said test information flow; and
- h) implementing said action when said abnormality of said system has been predicted as established.

17. (AS THREE TIMES AMENDED) A method for predicting an abnormality of a dynamic system using a continuous information flow that describes a development of a predictability of several future system states, comprising the steps of:

- D2*  
*cont*
- a) measuring comparison measured data of said system and test measured data of said system;
  - b) determining a comparison information flow that describes a comparison dynamic of said system using said comparison measured data;
  - c) determining a test information flow that describes a test dynamic of said system using said test measured data;
  - d) comparing said comparison information flow to said test information flow using said comparison information flow and said test information flow;
  - e) determining said abnormality to be predicted as established when said comparison information flow differs significantly from said test information flow;
  - f) determining said abnormality to be predicted as not established when said comparison information flow does not significantly differ from said test information flow.

*Sub E3*  
*D3*

18. (AS TWICE AMENDED) A method for predicting an abnormality of a dynamic system and for implementing a procedure in response to the abnormality, comprising:

- training a neural network to learn the dynamics of a system;
- evaluating a continuous information flow received from the system;
- predicting an abnormality when the information flow differs significantly from normal state information as determined by the neural network; and
- implementing a procedure, if an abnormality is predicted, to prevent or treat the abnormality.

### REMARKS

In the Advisory Action mailed on October 25, 2002, the Examiner indicated that the amendments submitted in the Amendment After Final Rejection filed on October 15, 2002 would not be entered because they raise new issues that would require further consideration and/or search. The Applicants submit the enclosed supplemental amendments, and request that the